

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

15 August 2013

DISCHARGER: Sierra Nevada Cheese Company

LOCATION & COUNTY: Willows, Glenn County

CONTACT(S): Ben Gregersen (President/CEO)

INSPECTION DATE: 15 August 2013

INSPECTED BY: Katie Connaughton, RWQCB

ACCOMPANIED BY: Ben Gregersen, Molly Davis, Heidi Cummings (Holdredge and Kull Consulting Engineers and Geologists)

BACKGROUND

Sierra Nevada Cheese Company (Discharger) is located just north of Willows in Glenn County. At the facility, approximately 95,000 gallons of milk are processed monthly to produce varieties of cheese, yogurt, and sour cream. Sierra Nevada Cheese Company, Inc. began operations under Waste Discharge Requirements Order No. R5-2005-0019, after purchasing the facility in 2003 from Dairy Farmers of America Inc. Dairy Farmers of America operated the Glenn Milk Plant, which processed raw milk into powdered milk and butter from 1988 to 2003. Dairy Farmers of America discharged up to 280,000 gallons per day (gpd) of cooling water to Walker Creek and up to 200,000 gpd of process water to the 7 treatment ponds. Sierra Nevada Cheese does not discharge to surface water and produces significantly less process wastewater, mainly only utilizing the three most adjacent treatment ponds (Ponds 1 through 3). The Discharger has occasionally discharged limited quantities of whey to portions of the remaining 4 ponds, but these ponds are typically empty. Sierra Nevada Cheese currently operates under revised Waste Discharge Requirements Order No. R5-2007-0043, adopted on 4 May 2007.

Process wastewater from cheese making and non-contact cooling water, are discharged to the facilities adjacent wastewater ponds. Process wastewater includes whey, wash water, and boiler blow-down. Whey is expelled as curds and drained, pressed, and washed during the production of cheese. Wash water includes several food-grade cleaning compounds used to clean equipment, work areas, and to flush lines. Heated water from the boiler is used to pasteurize raw products and to heat cultures and is softened by using an ion exchange system. To control the quality of boiler water, a couple of gallons of boiler blow down are discharged daily and makeup water is added. Non-contact water consists of well water used to cool the compressor and culture vats. The compressor cooling water is a constant discharge, while the cooling water from the culture vats in an intermittent discharge. The cooling water is essentially the same quality as the regional groundwater with an increased temperature.

Approved:		
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The Discharger is restricted to a maximum discharge of 8,000 gpd of process wastewater and an estimated 14,000 gpd of non-contact cooling water to three, unlined, wastewater ponds (Ponds 1, 2, and 3). Wastewater treatment consists of aeration, biological degradation, settling, and percolation through soils. The Report of Waste Discharge indicates that the design capacity of all seven ponds is approximately 201 million gallons.

OBSERVATIONS AND COMMENTS

I inspected the Sierra Nevada Cheese Facility on 15 August 2013 at approximately 9:30. The weather was clear and warm. The primary purpose of the inspection was to familiarize myself with the facility and to follow-up on an odor complaint received on 1 August 2013. I did observe odors coming from the wastewater ponds, but did not observe odors beyond the facility boundary. The Discharger had discharged a small quantity of whey in the supplemental ponds across the street (Ponds 4-7), which could have produced an odor, but during the inspection this material was dry and was not producing an odor. Ben Gregersen of Sierra Nevada Cheese discussed that they will be implementing some process changes in the near future. These changes include installation of new aeration units in Pond No. 1. Currently this pond is not aerated and is anaerobic, causing the majority of the odor and some fly production. A piped aeration system is installed in Pond No. 1, but according to the Discharger, has not been very effective. Additionally, the Discharger plans to install a suspended air floatation treatment system, to remove additional solids and BOD.

Other areas of concern were found during a review the monthly monitoring reports. Waste Discharge Requirements Order No. R5-2007-0043 specify under Discharge Specifications B.1. that *The monthly average discharge of all process wastewaters (excluding non-contact cooling water) into the wastewater pond system shall not exceed 8,000 gpd.* Self-monitoring reports for April 2013 and May 2013 reported exceedences of the wastewater discharge limitation of 8,000 gpd. The Discharge mentioned that a mag flow meter would be installed to obtain a more accurate measurement of wastewater flow rates. Currently the quantity of wastewater discharged is estimated based on the amount of process water used from the on-site supply well.

Also noted in the most recent self-monitoring reports, dissolved oxygen in Pond 1 has been measured below 1.0 mg/L. Discharge Specification B.5 states, *As a means of ensuring compliance with Discharge Specification No. 4, the dissolved oxygen content in the upper one-foot of any wastewater pond shall not be less than 1.0 mg/L.* The dissolved oxygen concentration will likely increase with the installation of aeration units, which will likely in turn improve the odor issue in this pond.

On 11 December 2011 Sierra Nevada Cheese Company submitted a *Review of Monitoring Well Assessment Report, Sierra Nevada Cheese Company, Order No. R5-2007-0043, Glenn County*, prepared by Holdrege and Kull. In the report, Holdrege and Kull outlines that based on Central Valley Water Board concurrences, the following changes will occur: reduce the frequency of groundwater level monitoring from monthly to quarterly until new wells are installed; discontinue monitoring and sampling of well MW-3; increase the height of the riser casing and install expansion caps on wells MW-1 and MW-4; and install proposed monitoring wells MW-5, MW-6, and MW-7. The additional monitoring wells were proposed to

be installed the summer of 2013, but due to future changes in operations and changes in groundwater levels, the Discharger would like to wait to install the additional wells until additional groundwater information was obtained.

SUMMARY

The areas of concern identified during the inspection and case file review will likely improve if the changes in operation occur as described by the Discharger during the inspection. Central Valley Water Board will request additional information regarding the changes in operation, and depending on how significant the changes in operation, the Discharger may be required to submit a new Report of Waste Discharge. Central Valley Water Board staff will then determine if Waste Discharge Requirements Order No. R5-2007-0043 will need to be revised to reflect the changes in operation.

Katie Connaughton, P.E.



Wastewater Treatment Pond 1



Tanks that were installed for a proposed new wastewater treatment processing facility (pilot project) that did not become operational.



Pond 1 Aeration pipes



Pond 5